

NewsLetter

Week of June 21, 2004

The World's Greatest Science Protecting America

Vol. 5, No. 13

Inside this issue ...



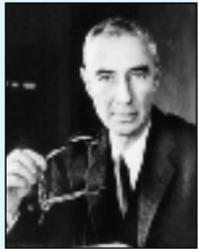
Director highlights accomplishments and successes at SET retreat
 Laboratory Director G. Peter Nanos makes opening remarks at last week's Senior Executive Team retreat in Santa Fe. In his opening remarks, Nanos highlighted Laboratory accomplishments and successes and spoke about near- and long-term goals for the Laboratory.Page 2

ISEC Knows: Travelers beware

Recently, Laboratory employees on travel in a foreign country were offered cellular telephones for personal use while visiting.Page 3

Lab's first director focus of symposium this week

April 22 was the 100th birthday of Los Alamos' first director, J. Robert Oppenheimer. To mark this anniversary and celebrate the work of Oppenheimer and his Manhattan Project colleagues, a symposium is scheduled this week in Los Alamos.Page 4



Laboratory volunteer helps excite Las Vegas students to learn science

Jim Rocha of PIT Disposition Science and Technology (NMT-15) is a former high school dropout and a volunteer at the West Las Vegas Middle School and West Valley Middle School. He has volunteered at the two schools since 2001.Page 8



The Laboratory's core values are Service to Nation, Integrity and Openness, Passion for Excellence and Innovation, Personal Accountability, Respect for Others and Teamwork. Of the six core values, which one is most meaningful to you and why? Learn what your co-workers had to say on Page 6.



 Nonprofit Organization
 U.S. Postage Paid
 Albuquerque, NM
 Permit No. 532

P.O. Box 1663
 Mail Stop C177
 Los Alamos, NM 87545

LALP-04-001

Lab scientists provide new understanding of manganites

by Todd Hanson

Laboratory researchers recently unveiled a new theory explaining the strange coexistence of metallic and insulating phases in the crystals of a mineral called perovskite manganite. The theoretical framework they present could provide a basis for the engineering of nanoscale metallic and insulating phase patterns in manganites. Such phase patterns could be useful in the computer industry's quest to miniaturize computer disk drive heads beyond their current size limitations.

In a paper published in the scientific journal *Nature*, Los Alamos scientists Ken Ahn, Turab Lookman and Alan Bishop theorize that the presence of metallic and insulating phases in perovskite manganite are strain-induced, caused by pressures applied to the mineral's structure lattice during formation.

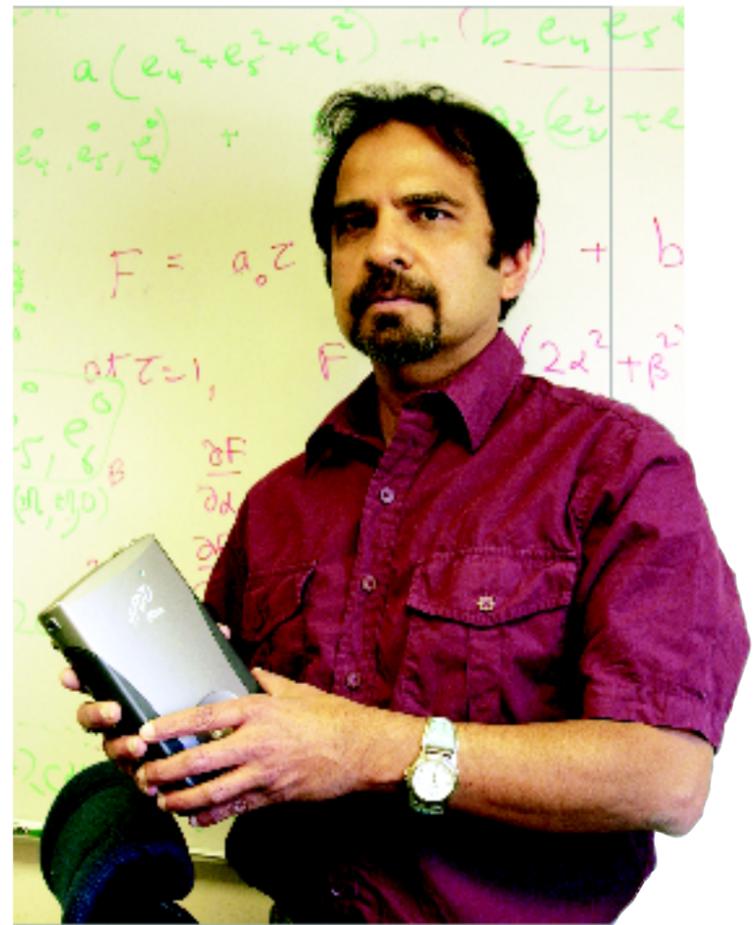
Perovskite manganite, or manganite, is a steel-gray or black mineral that occurs as crystals of manganese ore. Perovskite refers to the cubic crystal form the manganite may take.

According to Lookman, a physicist in Condensed Matter and Statistical Physics (T-11), a better understanding of the nanoscale structure of manganites is more than simply an academic adventure. "If the computer industry is going to continue to miniaturize electronics beyond silicon's current limitations, it will probably be necessary to look at materials like manganites, where, for example, nanoscale structures such as coexistent metallic and insulating phases can be built within media that are otherwise homogenous," Lookman said.

The evolution of computer drives has been made possible to a significant extent by a better understanding of magnetoresistance in materials. In 1988, a property called "gigantic magnetoresistance" was discovered in certain materials that made them useful for creating better magnetic read heads for computer disk drives. In 1994, a more powerful magnetoresistance phenomenon known as "colossal magnetoresistance" was discovered in manganite and other materials with perovskite crystalline structure that made them appealing to industry as potential materials for use in a new generation of miniature magnetic read heads for computer disk drives. While gigantic magnetoresistance-based technologies are now used in most hard drives, colossal magnetoresistance has been less widely understood and therefore not been applied.

The Los Alamos discovery could lead to advanced electronic applications of colossal magnetoresistance in the future, if the strain-induced metallic and insulating phases can be replicated at nanoscales using electromagnetic radiation, explained Lookman.

The research was funded by the Department of Energy's Laboratory-Directed Research and Development (LDRD) program. LDRD funds basic and applied research and development focusing on employee-initiated creative proposals selected at the discretion of the Lab director.



Turab Lookman of Condensed Matter and Statistical Physics (T-11) holds a external hard drive as he talks about a quest to miniaturize the computer disk drive heads beyond their current size limitations. Photo by LeRoy N. Sanchez

Critters on Lab lands call for caution



Illustration by Hector Hinojosa

With the onset of summer and warmer weather, the propensity to take part in outdoor activities such as hiking, walking and jogging increases. It also means people may encounter potentially dangerous animals.

The area in and around the Laboratory always has been home to mountain lions and a host of other large wildlife species, such as bears. Because animals and humans cross paths, people are urged to be cautious — for their own safety and for the safety of the animals.

Ecology (RRES-ECO) issued a general notice about black bear and mountain lion encounters. It can be found on the RRES-ECO Web site at www.esh.lanl.gov/~esh20/encounters.shtml online.

Generally, if Lab workers encounter mountain lions or black bears they shouldn't run or turn their backs on the animal. They should back away slowly and remain calm. Returning to a safe place, such as a vehicle or building is advised.

Lab workers should call 911 if attacked and in need of medical attention. Mountain lions or bears that become a nuisance should be reported to RRES-ECO at 7-0730. Workers who feel immediately threatened by a mountain lion or black bear should contact Emergency Management and Response (S-8) at 7-6211.

The White Rock Training Center also offers a wildlife safety class, "Living with Mountain Lions, Bears, Coyotes, Deer, and Elk."

The class is offered in cooperation with RRES-ECO, Network Engineering (CCN-5) and the New Mexico Department of Health.

The safety and awareness class is free and open to all Laboratory workers, subcontract personnel, and local, state and federal agencies.

Register online through the Virtual Training Center at int.lanl.gov/training/training.shtml or call 7-0059 between 8 a.m. and noon.

Los Alamos National Laboratory NewsLetter

The Los Alamos NewsLetter, the Laboratory bi-weekly publication for employees and retirees, is published by the Public Affairs Office in the Communications and External Relations (CER) Division. The staff is located in the IT Corp. Building at 135 B Central Park Square and can be reached by e-mail at newsbulletin@lanl.gov, by fax at 5-5552, by regular Lab mail at Mail Stop C177 or by calling the individual telephone numbers listed below. For change of address, call 7-3565. To adjust the number of copies received, call the mailroom at 7-4166.

Editor:
Jacqueline Paris-Chitanvis, 5-7779

Associate editor:
Steve Sandoval, 5-9206

Production editor:
Denise Bjarke, 7-3565

Graphic designer:
Edwin Vigil, 5-9205

Staff photographer:
LeRoy N. Sanchez, 5-5009

Los Alamos National Laboratory is operated by the University of California for the National Nuclear Security Administration (NNSA) of the U.S. Department of Energy and works in partnership with NNSA's Sandia and Lawrence Livermore national laboratories to support NNSA in its mission.

Los Alamos enhances global security by ensuring safety and confidence in the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction and improving the environmental and nuclear materials legacy of the Cold War. Los Alamos' capabilities assist the nation in addressing energy, environment, infrastructure and biological security problems.



Printed on recycled paper.
Please recycle.

FROM THE TOP



Director highlights accomplishments and successes at SET retreat



Laboratory Director G. Peter Nanos makes opening remarks at last week's Senior Executive Team retreat in Santa Fe. In his opening remarks, Nanos highlighted Laboratory accomplishments and successes and spoke about near- and long-term goals for the Laboratory. Following Nanos, Carolyn Mangeng, deputy Laboratory director, spoke about Laboratory priorities, while Ed Wilmot, manager of the Department of Energy/National Nuclear Security Administration Los Alamos Site Office talked about the customer's perspective of the Laboratory. Breakout sessions on revitalizing science at the Laboratory, Integrated Work Management, the Lab's national security mission, communications and operational efficiency among others, guest speakers and panel discussions also were part of the three-day SET retreat. The July 8 issue of the Los Alamos NewsLetter will include a From The Top summarizing goals and accomplishments of the retreat. Photo by Ed Vigil



NEWS FROM UC

Editor's note: The following is from a June 17 University of California news release. To read the entire news release, go to www.universityofcalifornia.edu/news/ online.

Nobel laureate Chu to lead Lawrence Berkeley Laboratory

Nobel Laureate and Stanford University physicist Steven Chu is the new director of Lawrence Berkeley National Laboratory, operated by the University of California.

Regents of the university met in special session via teleconference June 17 to act on a recommendation from UC President Robert Dynes to name Chu as director. He will begin work as Lawrence Berkeley's sixth director Aug. 1.

Chu replaces Charles Shank as Berkeley Lab director. Shank plans to return to teaching and research at UC Berkeley.

"Steve Chu brings to this position outstanding leadership qualities and a record of superior achievement in science," Dynes said. "His combination of skills is precisely what we need to keep the Lawrence Berkeley National Laboratory at the forefront of scientific excellence and to guide the lab wisely through the upcoming potential contract competition."

"The opportunity to lead Lawrence Berkeley National Laboratory at this time is an exciting prospect and a tremendous honor," said Chu. "The Berkeley Lab is a leader in scientific and technological discovery, and I look forward to working with the men and women at the laboratory, who are committed to preserving and enhancing that scientific excellence."

Chu, who earned his doctorate from UC Berkeley, currently is the Theodore and Francis Geballe Professor of Physics and Applied Physics at Stanford, where he has been on the faculty since 1987.

In 1997, Chu, 55, was awarded the Nobel Prize in physics with Claude Cohen-Tannoudji and William D. Phillips "for development of methods to cool and trap atoms with laser light." Beginning in 1989, Chu expanded his research scope to include polymer physics and biophysics at the single-molecule level.

Chu chaired the physics department at Stanford from 1990 through 1993 and again from 1999 through 2001. He previously was at AT & T Bell Laboratories, where from 1983 through 1987 he was head of the quantum electronics research department.

Chu was a member of the ad-hoc cabinet committee on budget and strategic planning, formed during a critical period for Stanford in 1991-92, and was a member of the presidential search Committee that brought Gerhard Casper to Stanford in 1992.

With three other professors, Chu initiated Bio-X, a campus-wide initiative that brings together researchers from the physical and biological sciences with those from engineering and medicine. He went on to help plan the Bio-X program and its central laboratory, the recently constructed James H. Clark Center. He also played a key role in establishing and funding the Kavli Institute for Particle Astrophysics and Cosmology, another independent laboratory at Stanford.

Chu received his A.B. degree in mathematics and his bachelor's degree in physics in 1970 from the University of Rochester. He received his doctorate in physics from UC Berkeley in 1976 as a Lawrence Berkeley National Laboratory employee. He was a postdoctoral fellow at UC Berkeley in 1976. Chu has been a visiting lecturer at Harvard University, Collège de France, Oxford and Cambridge universities. He currently is the 2004 Hitchcock Lecturer at UC Berkeley.

Laboratory Director G. Peter Nanos said of Chu's appointment: "The University of California's appointment of Steven Chu as the new director of Lawrence Berkeley National Laboratory personifies the exemplary science that is the hallmark of the Berkeley lab. Having a scientist of Steven Chu's stature, a Nobel laureate in physics, professor and chair of the physics department at Stanford University, and former staff member at LBNL and Bell Laboratories, assures that LBNL will have great scientific leadership into the future."



Steven Chu

Prime Contract Office to be focal point for Laboratory contract issues

by James E. Rickman

The Laboratory's new Prime Contract Office (PCO) is providing institutional focus and oversight for issues related to the Department of Energy Prime Contract for Laboratory operations.

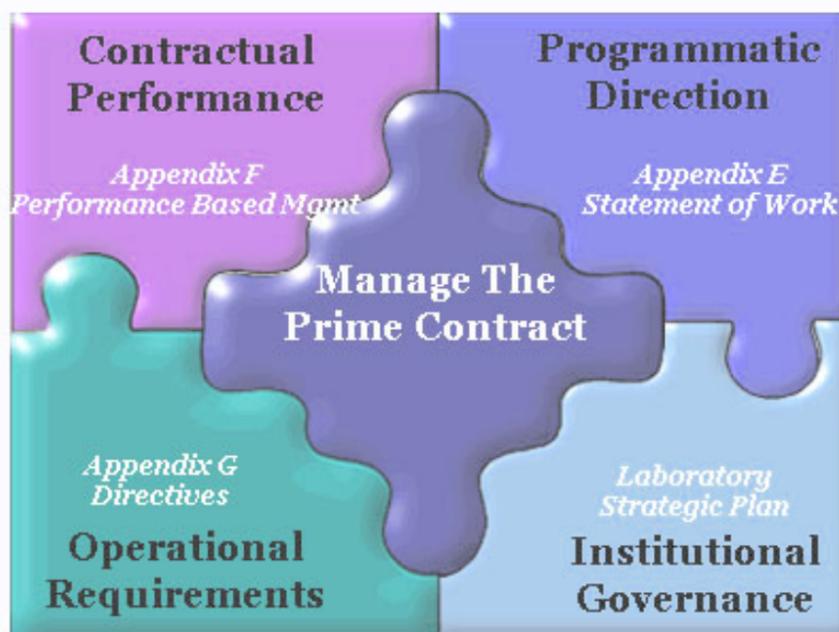
Laboratory Director G. Peter Nanos and Associate Director for Administration Rich Marquez formally established the PCO during a recent signing ceremony. Bill Wadt leads the new office; the Quality Improvement Office has been closed out and personnel affiliated with QIO are transitioning into the new roles to improve management of the prime contract.

The transformation from QIO to PCO is more than a mere name change, Wadt said.

"Creation of PCO is fulfilling a Laboratory business objective under Laboratory Strategic Goal I: 'Employ those business practices that best serve (the institution's) trusted, competitive scientific solutions,'" he said. "We will be building upon processes already in place under appendices E, F and G of the Prime Contract and continue to build upon the momentum that already has been established by previous successful institutional improvement efforts."

Wadt said the PCO will apply best practices to contract administration in order to engender better business relationships with Laboratory customers by assisting Laboratory managers to reduce unfunded programmatic or operational commitments or requirements, and better align institutional resources with Laboratory commitments and plans. Specifically, under its charter, PCO's functions include

- serving as critical focal point for all contract actions related to performance of prime contract obligations;
 - serving as the primary interface with the National Nuclear Security Administration regarding the contract and the Laboratory's positions on NNSA directions on the contract;
 - exclusively providing intake and dissemination of all NNSA direction, guidance and interpretation related to the prime contract;
 - coordinating Laboratory directorate involvement in contract issues;
 - promoting optimal relations with NNSA and working to early resolution of potential contract disputes or changes via negotiation, partnering or innovative dialogue;
 - promoting and preserving the Laboratory's right to use expertise and ingenuity in fulfilling contract objectives and obligations;
 - and executing special projects that elevate contract performance.
- "PCO will play a vital role in the Laboratory's future," said Wadt. "Right now, the current lack of formality and executive processes



related to the prime contract has resulted in a legacy of unfunded or under-funded programmatic and operational requirements; inadequate alignment and focus of institutional resources; and miscommunication and misunderstandings with customers and stakeholders regarding the contract. We will turn that legacy around."

Planning for the PCO occurred over the last year. Planners used simple benchmarks of selected DOE laboratory and facility management and operations contractors to decide upon a basic organizational approach. Next, the planners agreed upon several design principles: leverage existing Laboratory processes and evolving improvements; use a process management approach to develop and operate the PCO; enable fact-based contract decisions by senior management; and work in partnership with Laboratory managers. In January, more than 60 managers and subject matter experts from across the Laboratory participated in four workshops that helped define the key PCO processes, their basic requirements, and critical interfaces and partnerships that must be established and maintained.

PCO intends to maintain communications as the transformation process continues. Additional information related to the office can be found at <http://pco.lanl.gov/> online.



Lab participates in Santa Fe Business Expo

Carlos Chacon of the Community Relations Office (CRO), Seth Hinshaw, center, of Procurement (SUP-1) and Tim Martinez, right, also of CRO talk with a customer, left, at the Laboratory's information booth at the 2004 Santa Fe Business Expo recently held in Santa Fe. The small-business advocacy team in CRO staffed the Lab's booth and distributed information about Lab small-business outreach programs and efforts, procurement opportunities at Los Alamos, the Lab's Ombuds Program Office and technology transfer initiatives. Photo courtesy of CRO



ISEC KNOWS

Travelers beware

Recently, Laboratory employees on travel in a foreign country were offered cellular telephones for personal use while visiting. Even though our employees were cautious about using the phones, they did so anyway. The occurrence was promptly reported to Internal Security (ISEC) upon their return.

Travelers abroad must be aware that these tactics are used to monitor employee activities in other countries.

Call ISEC at 5-6090 for more information regarding this and other activities that have been reported.



Lab's first director focus of symposium this week

Photo exhibit at Bradbury Science Museum

by Steve Sandoval

April 22 was the 100th birthday of Los Alamos' first director, J. Robert Oppenheimer. To mark this anniversary and celebrate the work of Oppenheimer and his Manhattan Project colleagues, a symposium is scheduled later this week in Los Alamos.

"Oppenheimer and the Manhattan Project" on Saturday is a daylong series of talks and presentations about the man who led the nation's development of the atomic bomb working out of a secret installation on the Pajarito Plateau. Among the scheduled speakers is Richard Rhodes, who wrote "The Making of the Atomic Bomb," and "Dark Sun." Rhodes also will deliver the symposium's keynote address.

In addition to the symposium, the Laboratory's Bradbury Science Museum has on display a traveling exhibit of photographs of Oppenheimer. Entitled "J. Robert Oppenheimer, 1904-1967: Photographs From His Life," the exhibit will hang in the museum through Sunday. Curated by members of the Oppenheimer Committee, the display includes more than 50 photos gathered from the collections of the Robert and Frank Oppenheimer families, the archives of the University of California, Berkeley's Bancroft library, Harvard University, Princeton University, the Institute for Advanced Study and the Laboratory. There is no admission fee to the museum or to see the Oppenheimer exhibit.

The Los Alamos Historical Society, a Laboratory-sanctioned organization, is co-sponsoring the events in Fuller Lodge downtown and in the Duane Smith Auditorium at Los Alamos High School. Other sponsors include the Atomic Heritage Foundation. Preceding the symposium on Friday is the dedication of the Oppenheimer House downtown where Oppenheimer and his family lived — the house was recently acquired by the Los Alamos Historical Society — and a dinner at Fuller Lodge.

Gov. Bill Richardson is scheduled to attend and Laboratory Director G. Peter Nanos also is scheduled to speak, as are New Mexico senators Jeff Bingaman and Pete Domenici. Nanos also is scheduled to take part in closing remarks at the symposium on Saturday.

The cost to attend the Friday evening dinner is \$65. The symposium on Saturday is \$50 and there are additional costs to attend other events.

For more information, go to www.atomicheritage.org or www.losalamos.com/Historicalsociety/ online. Additional information also is available by calling the Los Alamos Historical Society at 662-6272 or the Atomic Heritage Foundation at (202) 293-0045.



Russian Academy of Sciences member visits Laboratory

Laboratory Director G. Peter Nanos, left, visits with Russian Academy of Sciences member Vladimir E. Fortov, right, recently at the University House at Technical Area 3. Nerses "Krik" Krikorian, center, with International Research, Analysis, and Development (N-3) hosted Fortov's visit. Fortov was at the Lab to meet Director Nanos and visit with several Lab staff members on Laboratory programs and research. Fortov also gave a presentation on "Strongly Nonideal Plasmas: Pressure and Charge Coupling" at the J. Robert Oppenheimer Study Center. Fortov, a Russian Academy of Sciences member since 1991, is recognized around the world for his scientific and defense-related work. Pushing the limits of science, Fortov measured the properties of dense plasma, which was a task presumed impossible. Following his successful discovery, he was asked to supervise scientific research at Arzamas 16, Moscow's Institute of High Temperatures, and the highly classified design bureau, Vympel. Fortov's research and development of a hypervelocity impact shield gained him the Red Banner of Labor in 1986, and in 1999, he was presented with the P.W. Bridgman Gold Medal of the International High Pressure Society for his work on hot plasma and the collision of the comet Shoemaker-Levy and the planet Jupiter. Fortov currently is involved in numerous scientific organizations, including the International Union of High Pressure and Technology, European Academy of Arts and Sciences, the International Academy of Aeronautic and the U.S. National Academy of Engineering. Photo by Ed Vigil

PATENT AWARDS



Editor's note: Some of the individuals listed below are no longer employed at the Laboratory but were at the time they applied for the patent.

Recently issued patent awards

Methods and optical fibers that decrease pulse degradation resulting from random chromatic dispersion
Patent No. 6,701,050 issued March 2
Michael Chertkov of Complex Systems (T-13) and **Ildar Gabitov** of Mathematical Modeling and Analysis (T-7)

Synthesis of labeled metabolites
Patent No. 6,709,645 issued March 23
Rodolfo Martinez, Louis Silks III, Clifford Unkefer and **Robert Atcher** of Biotechnology, Spectroscopy and Isotope Chemistry (B-3)

Synthesis of [2H1, 13C], [2H2, 13C] and [2H3, 13C] methyl aryl sulfides
Patent No. 6,713,044 issued March 30
Rodolfo Martinez, Marc Alvarez, Louis Silks III and **Clifford Unkefer** of B-3

High-temperature superconducting composite conductor
Patent No. 6,716,545 issued April 6
Terry Holesinger of Materials Technology: Metallurgy (MST-6); and **Stephen Foltyn, Paul Arendt, James Groves, Quanxi Jia** and **Alicia Ayala** of the Superconductivity Technology Center (MST-STC)

Catalysts for lean burn engine exhaust abatement
Patent No. 6,716,783 issued April 6
Kevin Ott, Noline Clark and **Mark Paffett** of Actinide, Catalysis and Separations Chemistry (C-SIC)

Maximum density modification by pattern recognition of structural motifs
Patent No. 6,721,664 issued April 13
Thomas Terwilliger of Cell Biology, Structural Biology and Flow Cytometry (B-2)

Synthesis of 2H and 13C substituted compounds
Patent No. 6,730,805 issued May 4
Rodolfo Martinez, Marc Alvarez, Louis Silks III and **Clifford Unkefer** of B-3

Method and apparatus for separating mixtures of gases using an acoustic wave
Patent No. 6,733,569 issued May 11
Drew Geller of Tritium Science Engineering (ESA-TSE); and **Gregory Swift** and **Scott Backhaus** of Condensed Matter and Thermal Physics (MST-10)

Pulsed atmospheric pressure plasma source for emission spectrometry
Patent No. 6,734,964 issued May 11
Yixiang Duan, Zhe Jin and **Yongxuan Su** of Analytical Chemistry Sciences (C-ACS)

Tuning the properties of conjugated polyelectrolytes and application in a biosensor platform
Patent No. 6,737,279 issued May 18
Liaohai Chen of Spectroscopy, Imaging and Molecular Chemistry (B-4)

Nanos talk addresses diversity at Los Alamos

by Brenna Moore

Diversity is important and should be held in high regard at the Laboratory, Director G. Peter Nanos said in a recent talk. And while the Lab has made substantial strides in incorporating diversity across the Lab, there is always room for improvement.

At a talk in the Physics Building Auditorium at Technical Area 3, diversity within the Lab was discussed and suggestions were made on how to further improve. Nanos started by describing how important diversity is within the workplace, and how everyone benefits from the diversity various cultures bring.

Nanos noted that diversity is especially important in an environment like the Lab. "I have benefited greatly from virtually every diverse group at one time or another," said Nanos. He further stated that the country works best when individuals just work and care about personal relationships and pay no attention to which group a person belongs.

In order to make further progress with diversity, the pressure must be kept on. "It's like dieting. If we're going to maintain diversity, we're going to have to work on it everyday," said Nanos.

The Lab must strive for a more diverse setting, because second best is not good enough, said Nanos, who closed with a promise that he will "walk the walk and talk the talk" and honor the fairness of diversity. Nanos asked all Lab workers to join him in making the Laboratory the preeminent institution in the country.

Laboratory Director G. Peter Nanos talks about the importance of diversity at the Laboratory at a talk in the Physics Building Auditorium. Nanos noted that he has "benefited greatly from virtually every diverse group." The talk was sponsored by Los Alamos' Asian American Diversity Working Group, the Diversity Affirmative Action Board and the Diversity Office (DVO). Photo by Brenna Moore



Los Alamos Employees' Scholarship Fund drive extended to June 30

by Steve Sandoval

The Los Alamos Employees' Scholarship Fund drive has been extended to June 30. The drive allows University of California Lab employees and subcontract personnel to make a donation or pledge through payroll deduction. The program awards college

scholarships to Northern New Mexico area students.

As of June 16, about \$114,000 in pledges and donations have been received by the Los Alamos National Laboratory Foundation at its Española offices, said Tony Fox of the foundation. The goal of this year's scholarship drive is \$205,000.

Lab workers received pledge forms at their mail stops last month. Through payroll deduction, employees may donate between \$1 and \$10 or more each paycheck, and contributions to the scholarship fund are tax deductible. The \$1-to-\$10-per-pay-period range of suggested donations was developed to make it easy for all Lab personnel to participate. Payroll deductions will continue unless otherwise instructed by the donor. Lab workers can make changes to their pledge amounts by contacting their payroll office.

Lab personnel also can make a one-time donation by check or credit card. Personal checks should be written to the Los Alamos National Laboratory Foundation; Visa or Mastercard are accepted.

Since the program's inception, University of California Laboratory employees and subcontract personnel have contributed \$789,000 in donations or pledges to the Los Alamos Employees' Scholarship Fund giving campaign. More than 250 high school seniors or college undergraduates have received scholarships through the fund since 1999.

The scholarship program is managed by the not-for-profit Los Alamos National Laboratory Foundation. "The foundation manages the scholarship fund at no cost to the donor, and 100 percent of all donations are awarded to [some of] the best and brightest students in New Mexico," said Fox. He said the foundation also will match all donations to one of two endowments up to \$40,000.

"The foundation is proud to offer this service to the [scholarship fund]," Fox said. "Thanks to our past and current donors, the Los Alamos Employees' Scholarship Fund has become the largest scholarship fund in Northern New Mexico."

The Laboratory Foundation is a philanthropic grant-giving entity created in 1997. It supports a range of regional and community not-for-profit organizations.

For more information on the scholarship fund, write to Fox at tfox@lanlfoundation.org by e-mail.

RCRA badges available online

Special badges listing which items must be kept out of the Laboratory's solid waste stream are now available online. The Risk Reduction and Environmental Stewardship (RRES) Division developed the badges to provide Laboratory employees with a straightforward guide for what they can and cannot

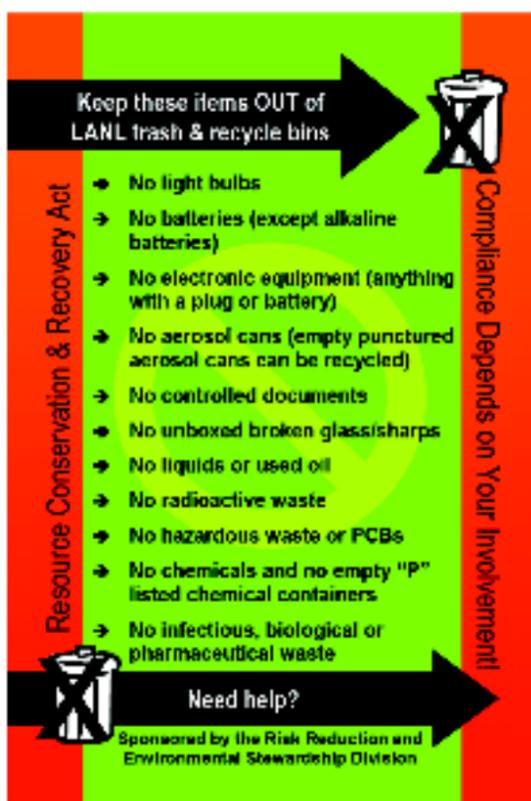
dispose of at work. In accordance with the Resource Conservation and Recovery Act as well as other environmental regulations, the badges provide a detailed list of the items to be kept out of the trash:

- Light bulbs
- Batteries
- Electronic equipment
- Aerosol cans
- Controlled documents
- Unboxed broken glass/sharps
- Liquids or used oil
- Radioactive waste
- Hazardous waste
- Polychlorinated Biphenyls (PCBs)
- Chemicals
- Empty "P" listed chemical containers
- Infectious, biological or pharmaceutical waste

The badges also provide employees with contact information for questions they might have regarding waste disposal or pollution prevention at the Laboratory. Pollution Prevention Program Manager Dennis Hjeresen stressed that pollution prevention is an ongoing process at the Laboratory and encouraged employees to use the badge.

"The basic issue here is giving people a little reminder that we're all responsible for what goes out in the waste stream," Hjeresen said.

Employees can go to www.p2.lanl.gov or int.lanl.gov/recycle to print badges for themselves and their co-workers.



So...what do you think?

Q: The Laboratory's core values are

- Service to Nation
- Integrity and Openness
- Passion for Excellence and Innovation
- Personal Accountability
- Respect for Others
- Teamwork

Of the six core values, which one is most meaningful to you and why?



Keith Greene of Remediation Services (RRES-RS)

"Teamwork. To provide proper teamwork you must have differing areas of expertise, attitudes, backgrounds and personality styles. By having this, all areas can be discussed and addressed to have the best possible outcome."



Gina Koehler and Jennifer Carr of Occupational Medicine (HSR-2)

"We think 'Integrity and Openness' and 'Respect for Others' are equally important, because integrity and respect are the most basic qualities needed to operate a successful organization."



Rob Vitek of Enterprise Information Infrastructure (IM-3)

"Service to Nation and Respect for Others. In everyday life a person must respect all others no matter [the] age, race or ideas."



Robert Budd of Environmental Characterization and Remediation (RRES-ECR)

"Passion for Excellence and Innovation is the most meaningful, because it represents the desire to do the job to the best of your abilities and strive to improve the Laboratory."



Phyllis Webb of HSR-2

"It is impossible for me to choose one over the other. Our unique value is Service to the Nation."



Ryan Toya of the Institutional Budget Office (CFO-3)

"Passion for Excellence and Innovation. If you have passion for excellence and innovation then you will cover the other five core values. Having passion in your work takes integrity, service, respect, accountability, teamwork and openness."

PEOPLE



Yates new deputy for Lab's Center for Homeland Security



Mary Anne Yates

Mary Anne Yates is the new deputy director for the Laboratory's Center for Homeland Security (CHS). Her principle duties include assisting Center Director Wiley Davidson in managing the business of the center, engaging in communication and outreach initiatives internally and externally and participating in program development for the center.

Said Davidson, "Having Mary Anne in this role will be a great boost for the center, especially in our Washington interactions where she has such broad experience and so many key contacts. Her work will help place our best homeland security science and technology where the right customers can become aware of it."

Previously, Yates was the senior adviser for Homeland Security and Threat Reduction Initiatives in the Threat Reduction Directorate office. She oversaw the coordination of related research projects within Los Alamos and worked with other National Nuclear Security Administration laboratories to assist in coordination of homeland security programs.

In addition, she served regular rotations on the staff of the NNSA Policy Office. Yates also has been chief of staff to Don Cobb, the associate Laboratory director for threat reduction. In that capacity, she coordinated the operations of the directorate office, oversaw discretionary spending in the directorate and worked with sponsors from such diverse areas as the Defense Department, State Department, Office of Homeland Security and the Intelligence Community.

Before joining the TR office, Yates was the lead project leader for all START III activities at the Laboratory and deputy to the program manager for Nonproliferation and Arms Control.

From 1993 through 1996, Yates served as a technical adviser to the Nonproliferation and National Security Office at DOE headquarters. This included serving as executive secretary of the U.S. delegation for several bilateral negotiations with the Russian Federation regarding the cessation of production of nuclear material. She also led the DOE participation in preparation for a Fissile Material Cutoff Treaty. In addition, she spent eight months on the U.S. delegation to the Conference on Disarmament in Geneva for the conclusion of the negotiation of the Comprehensive Test Ban Treaty.

Yates has been an active researcher contributing to such diverse programs as accelerator transmutation of waste, nuclear testing, "Star Wars" technology, laser fusion, plasma physics, particle physics, nuclear physics, atomic physics and nuclear chemistry. She has publications in all of the above fields.

Yates received her doctoral degree in nuclear chemistry from Carnegie-Mellon University.

Sivils named NSSE chair elect

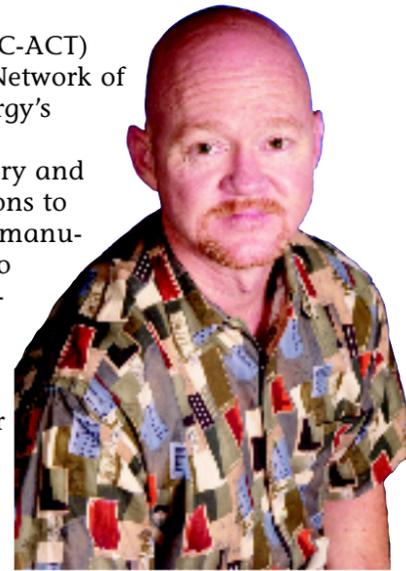
L. Dale Sivils, acting Applied Chemical Technology (C-ACT) group leader, has been named chair-elect of the Network of Senior Scientists and Engineers for the Department of Energy's National Nuclear Security Administration.

The NSSE is an advisory and working group of laboratory and production plant technical personnel that develops solutions to nuclear weapons stockpile issues, promotes science-based manufacturing, supports joint technical endeavors, and works to enhance and maintain the resources critical to the continuing success of the nuclear weapons complex.

"I'm pleased to have been chosen to lead such a distinguished group," said Sivils. "The NSSE is a treasure trove of weapons production experience from across the nuclear weapons complex. I hope to leverage this experience to enhance Los Alamos' relatively new production missions, as well as share technology developed here with the rest of the complex."

The NSSE envisions a production complex with the capabilities and capacity to maintain, refurbish, modernize and ensure the reliability of the stockpile. The primary goal of the NSSE is to foster collaboration and excellence among the technologists in the nuclear weapons complex as a means of achieving this vision. The NSSE can act as a catalyst for immediate, short-duration efforts that address complex-wide issues, as well as for the initiation of long-term, multi-site technical projects.

Sivils received his doctoral degree in chemistry in 1995 from the University of Missouri-Rolla and joined Los Alamos as a technical staff member later that year. Sivils developed the Materials Compatibility Program for Los Alamos' Pit Manufacturing and Certification Project. He was one of the founders and first chair for Los Alamos' War Reserve Materials Compatibility Board and has extensively studied war reserve manufacturing related materials compatibility and aging issues. He also founded Los Alamos' QC-1 compliant Materials Testing Laboratory, which is responsible for materials compatibility testing and materials certification. Dale became deputy group leader C-ACT in 2001 and was appointed acting group leader in 2004.



L. Dale Sivils



June service anniversaries

35 years

Lila Herrera, NMT-16
Frank Maestas, ISR-4
Nicholas Nagy, CCN-DO
Raymond Romero, ESA-AET

30 years

Carla Jacquez, RRES-WQH
Edalia Lucero, N-2
Robert Meier, ESA-WR
Jose Romero, CFO-SYSTEM
Larry Sanders, D-DOD
Vicente Sandoval, NMT-5
Allen Trujillo, FWO-FIRE
Andres Trujillo, HSR-5
Richard Valerio, SUP-2
Benny Vigil, CCN-DO

25 years

Mary Ann Abeyta, C-AAC
James Balkey, NMT-DO
Dana Christensen, NTA-PO
Martin Crow, ESA-WDS
Jane Eileen Martinez, CFO-2
Scott Evans, P-24
Anita Flores, IM-1
Robert Gibson, P-24
Ward Hawkins, EES-11
Thomas Hurry, P-24
Gerald Lucero, ESA-TSE
Mark Martinez, STB-RL
Evan Noveroske, ISR-3
Walter Treadaway, RRES-MAQ
David Tubbs, X-1
Stephen White, X-5
Michael Whitehead, C-PCS

20 years

Frank Abeyta, DX-2
Micheline Devaurs, NWP
Margaret Durbin, ADA
James Dyke, NMT-2
James Faulkner, DX-3
David Finnegan, C-INC
David Guenther, ISR-4
Donna Hofmann, NMT-1
David Huerta, NMT-15
Patrick Lara, LANSCE-2
Duncan MacArthur, N-1
Stephen McCleary, FWO-DF
Barbara McInroy, FWO-SWO
Albert Montoya, IM-9
Jody Niesen, ESA-WMM
Bill Papatheofanis, N-3
Ronald Pfaff, CCN-8
Allen Romero, FWO-DF
Paulette Sanchez, NMT-4
Susan Seestrom, ADWP

Donna Smith, TT
Kathryn Smith, ISR-3
Jeffrey Stoddard, ADTR-TRO
David Torney, T-10
Chang-Shung Tung, T-10
Larry Vaughan, DX-3
Gerald Veazey, NMT-2
Phillip Warnock, DX-6
Thomas Zocco, NMT-16

15 years

Lorraine Abney, CFO-2
Marc Alvarez, B-3
John Buksa, PCO
Ellen Castille, LC
Dena Edwards, S-2
Joe Gonzales, FWO-MSE
Robert Gurule, CCN-12
Diane Hansen, CCN-4
Jeffrey Hollander, NMT-1
Harry Jenkins, DX-5
David McIntosh, FWO-MSE
Michael Neergaard, N-3
Karen Pao, X-5
Daniel Rees, LANSCE-5
Amy Regan, ISR-4
William Rider, CCS-2
Michael Shinas, DX-3
Roy Spencer, FWO-DECS
Patrice Stevens, NWP
David Suszcynsky, ISR-2
Robert Sutherland, B-5
Ross Tapia, CFO-3
Sandra Villa, PS-2
Tony Warnock, CCS-3
Patricia Wright, NMT-15
Thomas Yoshida, C-ACS

10 years

Jeremy Boak, RRES-CH
James Downs, ISEC
Daniel Garcia, NMT-2
Robert Hanrahan, ADWP
John Hargreaves, ESA-WSE
Diana Hollis, RRES-EA
Lilia Jimenez, DX-7
Russell Johns, D-5
Kimberly Katko, ISR-4
Kenneth Keeler, ESA-GTS
Chad Lauritzen, DX-3
Mark Ledoux, ESA-DO
Cheng Liu, MST-8
Ternel Martinez, SUP-1
Sandra Mecklenburg, C-AAC
Luis Morales, NMT-16
Don Mullins, NMT-2
Charles Nakhleh, D-1

Trung Nguyen, HSR-8
David Poston, D-5
Linda Roepcke, C-ACT
Natalie Romero-Trujillo, HSR-8
Douglas Thacker, ESA-EDE
Shelley Thompson, FWO-TA-55
John Turner, CCS-2
Mona Valencia, PM-1
Amy Wong, NMT-9

5 years

Joseph Arrowood, ISR-4
Andrew Baker, HSR-4
Jeanne Ball, MSM-DO
Michael Browne, N-1
Charles Campbell, S-2
Harold Chacon, HSR-1
Stacy Chacon, LANSCE-6
Rene Chavarria, NMT-15
Sung-Eun Choi, CCS-1
Korwyn Christensen, S-1
Michael Cline, D-3
Judith Cohn, B-5
Stephen Cossey, RRES-MAQ
David Gemeinhart, PM-4
Maya Gokhale, ISR-3
Ryan Hess, NMT-2
Brett Hollander, IM-1
Yasuyuki Horie, X-7
Srinivas Iyer, B-4
Jennifer Lopez, HR-D-DIR
Jeff Maestas, CCN-2
Erika Maestas, CCS-3
Isaac Martinez, NMT-16
Eric Mas, T-1
Mario Medina, HSR-1
Jonetta Nixon, SUP-5
Eric Ovaska, IM-2
Alan Paris, MST-NHMFL
Daniel Richards, ESA-WDS
David Romero, HSR-1
Chris Roybal, FWO-CMR
Dana Sandoval, N-4
Randy Sandoval, NMT-16
Daniel Schwartz, NMT-16
Melanee Shurter, RRES-ECO
Jian Song, B-5
Kurt Steinhaus, CER-1
John Telford, NMT-10
Trevor Tippetts, ESA-WR
Frans Trouw, LANSCE-12
Stanley Trujillo, NMT-16
Jason Vigil, HSR-1
Michael Wall, CCS-3
Alyson Wilson, D-1
Nathan Yost, FWO-DECS
Peter Zugger, IM-3



This month in history ...

June

780 BC — China becomes the first to record a solar eclipse.

1314 — Battle of Bannockburn establishes independence of Scotland.

1752 — Benjamin Franklin flies a kite in a lightning storm and discovers electricity.

1815 — On the fields near Waterloo in central Belgium, 72,000 French troops, led by French Emperor Napoleon, suffered a crushing military defeat from a combined allied army of 113,000 British, Dutch, Belgian and Prussian troops led by the British General Wellington. Napoleon was then sent into exile on the island of St. Helena off the coast of Africa.

1876 — Lt Colonel George Custer and the 7th Cavalry are wiped out by Sioux and Cheyenne Indians at the Battle of Little Big Horn.

1885 — The Statue of Liberty arrives in New York City.

1903 — A new element, Polonium, discovered by Curie husband and wife team.

1919 — Treaty of Versailles is signed, ending World War I.

1938 — The first Superman comic is published.

1942 — J. Robert Oppenheimer joins the Met Lab to lead an effort on fast neutron physics, and prepares an outline for the entire neutron physics program.

1944 — D-Day, the largest amphibious landing in history, began in the early-morning hours as Allied forces landed in Normandy on the north coast of France.

1945 — The Interim Committee, organized to guide the final conduct of World War II and the post-war reconstruction and lead by Secretary of State-designate James Byrnes, issues the recommendations that the atomic bomb be dropped as soon as possible, that a urban area be the target, and that no prior warning be given.

1951 — The keel is laid for the USS Nautilus, the first nuclear-powered submarine.

1952 — East Germany closes its links with West.

1953 — Julius and Ethel Rosenberg, convicted of giving U.S. atom bomb secrets to the Soviet Union, are electrocuted at Sing Sing Prison in New York.

1964 — Nelson Mandela sentenced to life imprisonment in South Africa.

1968 — Robert F. Kennedy was shot and mortally wounded at the Hotel Ambassador in Los Angeles after winning the California Democratic primary.

1973 — Secretariat wins the Belmont Stakes by 31 lengths in world record time to capture the first Triple Crown in 25 years. Secretariat dies in 1989 after siring 653 foals.

1978 — Pluto's moon, Charon, discovered by James Christy.

1983 — NASA's Pioneer 10 crosses Neptune's orbit, becoming the first man-made object to leave the solar system.

1989 — The Chinese government ordered its troops to open fire on unarmed protesters in Tiananmen Square in Beijing.

1990 — Official removal of the Berlin Wall begins.

1997 — In Hong Kong, the flag of the British Crown Colony was officially lowered at midnight and replaced by a new flag representing China's sovereignty and the official transfer of power.

The information in this column comes from several sources including the online History Channel, the Newsbulletin and its predecessors, the atomic archive.com, Echo Vitural Center, Science & Technology, Real History Archives and "Carey Sublette, "Chronology for the Origin of Atomic Weapons" at www.childrenofthemanhattanproject.org/MP_Misc/atomic_timeline_1.htm



Breakfast, talk honor nation's veterans

Major James Bibb of the New Mexico Army National Guard talks about his experiences in Afghanistan in support of the 10th Mountain Division at the Veterans Committee Memorial Day breakfast in the Otowi Building cafeteria at Technical Area 3. Bibb and his brother, Sgt. David Bibb, spent more than nine months in Afghanistan, where they provided medical support to both civilian and military evacuees. David Bibb also works for the Santa Fe County Sheriff's Office and is assigned to the New Mexico Army National Guard. Their sister, Mary Beth Stevens, works for the Ombuds Office. The Office of Equal Opportunity (OEO) co-sponsors the breakfast and talk with the Lab's Veterans Committee. There are more than 1,100 veterans working at the Laboratory. Photo by LeRoy N. Sanchez



Jim Rocha of PIT Disposition Science and Technology (NMT-15) volunteers his time to help students learn about science. Left to right are Brittany Sabedra, seventh grade; Joshua Lucero, eighth grade; and John John Martinez, seated, seventh grade of the West Las Vegas school district. Rocha personally donates cash prizes along with certificates of accomplishment twice yearly at the West Las Vegas Middle School and West Valley Middle School. He has volunteered at the two schools since 2001.

Laboratory volunteer helps excite Las Vegas students to learn science

by Kathryn Ostic

Jim Rocha of PIT Disposition Science and Technology (NMT-15) is a former high school dropout and a volunteer at the West Las Vegas Middle School and West Valley Middle School. He has volunteered at the two schools since 2001.

Rocha works with at-risk children in grades 6-8 by encouraging the students to learn about science. Rocha knows all too well the perils of growing up on the poor side of town where drug, alcohol and gang-related activities run rampant. Rocha grew up in California's Central Valley, dropped out of school at 16 and served tours of duty in Vietnam before eventually earning bachelor's and master's degrees.

Rocha's early volunteering efforts began by providing the students of the West Las Vegas School district with a presentation about meteorology. "The students really enjoyed hearing my talk about thunderstorms, hail, tornadoes and how clouds and storms are formed," said Rocha.

After the science presentation, Rocha, who is a member of the Uranium Operations team in NMT-15, went prowling through the school's library stacks and was horrified that there were very few science books; what was available was circa 1960s and 70s outdated material, he said.

"On my way home, I decided I couldn't make my volunteering efforts a one shot deal. I knew that I had to do more for the kids to help enrich their learning environment," Rocha said. After speaking with his wife Carol about the outdated reading materials, she suggested that Rocha conduct a book drive at work, he said.

Sandra Lucero of Waste Management/Environmental Compliance (NMT-7) helped Rocha with the book drive, grossing approximately \$2,000 for new books on every aspect of science.

Lucero also coordinated efforts with Lora MontaNegro, head librarian, of West Las Vegas Middle School and West Valley Middle School, which is located 25 miles southeast of Las Vegas. In addition, Lucero encouraged Laboratory employees to give presentations about science at both schools, said Rocha.

"My division and group management and the Lab in general also were extremely supportive. I was grateful that Laboratory technical staff members, technicians—everyone helped out in the 2002 into 2003 divisionwide effort to help enrich both schools," said Rocha.

Since 2003, Rocha has returned to his one-on-one volunteering efforts by personally donating cash prizes along with certificates of accomplishment twice yearly at both

schools. The certificates serve as science awards for the middle school students. The cash prizes are \$75 for first place, \$50 for second and \$25 for third place and are redeemable at WalMart.

"The certificates and the monetary prizes provide students with a sense of pride in their accomplishments and also with bragging rights, which encourages others to want to participate," said Rocha.

Other individuals that have been instrumental in making this effort successful are Roberta Cebada, science teacher; MontaNegro, librarian; Marvin Macauley, science teacher; and Hank Tapia, principal, all of the West Las Vegas school district, said Rocha.

"Rocha is our angel and our Santa Claus," said MontaNegro.

"It doesn't matter what background a person comes from, there is always an opportunity to give back to the community, said Rocha.

There are a lot of communities in Northern New Mexico that are in need that don't get as much support as the more well known areas do," Rocha added.

"I'll never stop volunteering at the West Las Vegas School district — they are like my second family," said Rocha.



Discussing specifics about the science awards that Rocha presents to middle school students are from left to right Lora MontaNegro, West Las Vegas librarian, Rocha of NMT-15 and Roberta Cebada, West Las Vegas science teacher. Inset photo: Certificates Rocha gave to students. Photos by Leroy N. Sanchez